Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

What is claimed is:

Claim 1 (currently amended): A wavelength division multiplexer (WDM) assembly, comprising:

a plurality of optical fibers, a first fiber fusing with a second and third fibers and elongating to a length to form a first and second fusion regions at two different portions of the first fiber, the second fiber extended from the first fusion region further fusing with a fourth fiber and elongating to a length to form a third fusion region; and

at least one receiving sleeve receiving the first, second and third fusion regions therein, the receiving sleeve having a cylindrical shape so that the receiving sleeve has a same cross-sectional area at opposite first and second ends thereof;

wherein a complex light signal having a plurality of wavelengths is transmitted from the first fiber to the first fusion region, a predetermined wavelength is separated and goes into the second fusion region, and is further separated from the second fusion region to the first fiber, the other wavelengths are transmitted to the third fusion region via the second fiber, and are further separated from the third fusion region to the second fiber.

Claim 2 (canceled)

Claim 3 (previously presented): The WDM assembly as described in claim 1, wherein either or both ends of the receiving sleeve have glue applied thereto for

fixing corresponding of the optical fibers therein.

Claim 4 (currently amended): The WDM assembly as described in claim 1, further comprising at least one shrink sleeve enclosing the receiving sleeve therein, so that the receiving sleeve can be fixed in the shrink sleeve by heating.

Claim 5 (previously presented): The WDM assembly as described in claim 4, wherein either or both ends of the shrink sleeve have glue applied thereto for avoiding contamination.

Claim 6 (previously presented): The WDM assembly as described in claim 4, further comprising an outer tube receiving the receiving and shrink sleeves therein.

Claim 7 (previously presented): The WDM assembly as described in claim 6, wherein the outer tube has a through hole, a diameter of the through hole is larger than an exterior diameter of the receiving sleeve, and a space between the shrink sleeve and the outer tube is sealed with glue.

Claim 8 (previously presented): The WDM assembly as described in claim 1, wherein the receiving sleeve is made of quartz material.

Claim 9 (previously presented): A wavelength division multiplexer (WDM) assembly, comprising:

a plurality of optical fibers, a first fiber fusing with a second and third fibers and elongating to a length to form a first and second fusion regions at two different portions of the first fiber, the second fiber extending from the first fusion region further fusing with a fourth fiber and elongating to a length to form a third fusion region, in such way, the plurality of optical fibers forming a plurality of fusion regions;

wherein a complex light signal having a plurality of wavelengths is transmitted from the first fiber to the first fusion region, a predetermined wavelength is separated and goes into the second fusion region, and is further separated from the second fusion region to the first fiber extending from the second

region, the other wavelengths are transmitted to the third fusion region via the second fiber, and a next predetermined wavelength is further separated from the third fusion region to the second fiber extending from the third region, and the plurality of fusion regions are capable of separating a plurality of wavelengths from the complex light signal.

Claim 10 (previously presented): The WDM assembly as described in claim 9, further including at least one receiving sleeve receiving the first, second and third fusion regions therein, the receiving sleeve having a cylindrical shape.

Claim 11 (previously presented): The WDM assembly as described in claim 10, wherein either or both ends of the receiving sleeve have glue applied thereto for fixing corresponding of the optical fibers therein.

Claim 12 (currently amended): The WDM assembly as described in claim 10, further comprising at least one shrink sleeve enclosing the receiving sleeve therein, so that the receiving sleeve can be fixed in the shrink sleeve by heating.

Claim 13 (previously presented): The WDM assembly as described in claim 12, wherein either or both ends of the shrink sleeve have glue applied thereto.

Claim 14 (previously presented): The WDM assembly as described in claim 12, further comprising an outer tube receiving the assembled shrink sleeve therein.

Claim 15 (previously presented): The WDM assembly as described in claim 14, wherein the outer tube has a through hole, a diameter of the through hole is larger than an exterior diameter of the receiving sleeve, and a space between the shrink sleeve and the outer tube is sealed with glue.

Claim 16 (previously presented): A method for producing a WDM assembly, comprising the steps of:

providing at least four optical fibers;

positioning a first and second optical fibers parallel to one another, firing to fuse these two fibers and stretching them to a length sufficient to cause a light

signal with a predetermined wavelength to be coupled to the first optical fiber while light with other wavelengths is coupled to the second optical fiber, the first optical fiber and second optical fiber thus together forming a first fusion region;

arraying a third optical fiber and the first optical fiber that extends from the first fusion region next to each other, fusing these two fibers and stretching them to a length sufficient to cause the light signal with the predetermined wavelength to be coupled to the first optical fiber while the light with other wavelengths is coupled to the third optical fiber, the first optical fiber and the third optical fiber thus together forming a second fusion region;

fusing a fourth optical fiber and the second optical fiber that extends from the first fusion region and stretching them to a length sufficient to cause a light signal with a next predetermined wavelength to be coupled to the second optical fiber while light with other wavelengths is coupled to the fourth optical fiber, thus forming a third fusion region;

providing at least one receiving sleeve, the receiving sleeve receiving corresponding of the fusion regions therein;

providing at least one shrink sleeve, the shrink sleeve enclosing the receiving sleeve therein, and cutting off excess optical fiber lengths that extend out of the shrink sleeve; and

providing an outer tube, the outer tube receiving the shrink sleeve therein.

Claim 17 (previously presented): A method of claim 16, wherein either or both ends of the receiving sleeve have glue applied thereto after the fusion regions are fixed thereinto.

Claim 18 (previously presented): A method of claim 16, wherein either or both ends of the shrink sleeve have glue applied thereto after the receiving sleeve is assembled thereinto.

Claim 19 (original): A method of claim 16, wherein a space between the

shrink sleeve and the outer tube is sealed with glue after the shrink sleeve is assembled into the outer tube.

Claim 20 (canceled)